

REMARKS

Reconsideration of the restriction requirement is respectfully requested.

The amendments to the claims are clarifying amendments and are supported in the original specification and the original claims.

Many of the claims that are separately grouped in accordance with the restriction requirement have at least one prominent feature in common; so that they could be properly combined for searching and examination without undue burden on the Office. In fact, many of the separately grouped claims have plural features in common. Moreover, many of the separately grouped claims are commonly classified, and all relate to two closely related process schemes that prominently include a 5,7-lactone intermediate.

It is respectfully submitted that the multiple splintering of closely related claims will be prejudicial to Applicants' assignee. The multiple divisional applications required to protect the claimed subject matter will impose excessive expense and consume scarce manpower resources in prosecuting closely related cases. For reasons also set forth below, it is respectfully submitted that dividing the application in accordance with the instant restriction requirement will not be in the public interest either.

All the claims are directed to processes and intermediates in the reaction steps described in schemes for the preparation of eplerenone or eplerenone derivatives of Formula I. More particularly, each claim is directed to a process for preparing intermediates or intermediates in process Schemes 9 and 10 as described in the specification, in which eplerenone or a derivative thereof is ultimately prepared. Many of these

intermediates share distinctive structural features.

It is respectfully submitted that splintering the claims of this application into 24 separate inventions is unreasonable, will result in wasteful duplication of effort, cause Applicants' assignee to incur untoward expense, and impose an unwarranted burden on Applicants' manpower resources. It would seem to effect a similar burden on the resources of the Office.

Applicants therefore respectfully request that the claims be regrouped so that all processes and compounds having a particular distinctive structural feature be examined in a single group, as outlined in the following table.

Common Feature	Class 540 (47+)	Class 540 (3+)	Class 549 (200+)	Class 549 (612+)
17-keto to 17-spirolactone steroid		II, III, IV		
7-cyano to 5,7-lactone	I	V		
5,7-lactol to 5,7-lactone	VI			
epoxidation of 5,7-lactol or 5,7-lactone	VII, VIII			
hydrolysis of 5,7-acetal or protection of 5,7-lactol	IX, X			

conversion of 3-alkoxy- $\Delta^{3,4,5,6}$ steroid to 5,7-lactol	XI, XII			
5-cyano to 5 $\alpha$ -formyl	XIII			
epoxidation	XIV		XV	
3-ketal-5,7-lactone- $\Delta^{9,11}$ -17-keto steroid	XVI			
5,7-lactone- $\Delta^{9,11}$ -17-spirobutyrolactone steroid		XVII, XVIII		
3-keto-5,7-lactone and 5,7-lactol steroids	XIX			
3-keto-5,7-lactol-9,11-epoxy steroid	XX			
17-keto, 17-oxirane, 17-spirobutyrolactone steroid		XXI, XXII		
3-enol ether-7 $\alpha$ -formyl steroid				XXIV

Thus, referring to the table above, Applicants respectfully request that the claims be regrouped as follows:

1. Claim 63 (Group II), claim 64 (Group III) and claim 65 (Group IV) are directed to processes to prepare 3-ketal-

- 5,7-lactone- $\Delta^{9,11}$  steroids which have different structures at C(17). The 3-ketal and 5,7-lactone structures are distinctive and necessarily will be present in any prior art process that can reasonably form the basis for rejection of any claim of Groups II-IV. Not only do the Groups II-IV claims all require the 3-ketal-5,7-lactone- $\Delta^{9,11}$  feature, but all are in the same class and subclass, i.e., class 540 (3+).
2. Claims 50-60 (Group I) and claim 66 (Group V) are directed to the preparation of a 5,7-lactone steroid from a 7-cyano steroid. The presence of a 5,7-lactone structure is distinctive and these claims are in the same class, i.e., class 540.
  3. Claims 69-71 (Group VI) is directed to the oxidation of a 5,7-lactol steroid to a 5,7-lactone steroid. They may reasonably remain separate from the other claim groups.
  4. Claims 72-74 (Group VII) and 75-77 (Group VIII) are directed to epoxidation of a 3-keto-5,7-lactol- $\Delta^{9,11}$  steroid. The presence of a 3-keto-5,7-lactol- $\Delta^{9,11}$  structure is distinctive; moreover, these claims are in the same class and subclass, i.e., class 540 (47+).
  5. Claim 78 (Group IX) and claim 79 (Group X) are directed to processes which comprise reverse reactions. Claim 78 is directed to a process for the hydrolysis of a 3-ketal-5,7-acetal to a 3-keto-5,7-lactol structure to form a 3-keto-5,7-lactol structure, whereas claim 79 is directed to the protection of a 3-keto-5,7-lactol structure to form a 3-ketal-5,7-acetal structure. Moreover, claims 78 and 79 are in the same class and subclass, i.e., class 540 (47+).
  6. Claim 80 (Group XI) and claim 81 (Group XII) are directed to preparation of a 3-ketal-5,7-lactol-17-keto

steroid from a 3-alkoxy- $\Delta^{3,4,5,6}$  substrate. In claim 80, the starting material is a 7 $\alpha$ -formyl steroid. In claim 81, the starting material is a 3-keto-7 $\alpha$ -cyano steroid, which is converted to the 3-alkoxy- $\Delta^{3,4,5,6}$  intermediate that is in turn converted to a 5,7-lactol. Moreover, claims 80 and 81 are in the same class and subclass, i.e., class 540 (47+).

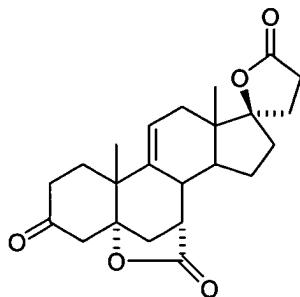
7. Claim 82 (Group XIII) is directed to reduction of a 3-alkoxy- $\Delta^{3,4,5,6}$ -7 $\alpha$ -cyano-17-ketal steroid substrate to form a 3-alkoxy- $\Delta^{3,4,5,6}$ -7 $\alpha$ -formyl-17-ketal steroid. It may reasonably be separated from the other claim groups.
8. Claims 93-101 (Groups XIV and XV) are directed to epoxidation where the dependent claims specifying steroid substrates are species to the generic claim 93. While claims specifying steroid substrates are patentably distinct from claim 93 specifying a substrate having an olefinic double bond, the epoxidation of the double bond in the substrate is the main feature of the claim.
9. Claim 141 (Group XVI) is directed to a 3-ketal-5,7-lactone- $\Delta^{9,11}$ -17-keto intermediate. It may reasonably be separated from the other claim groups.
10. Claim 142 (Group XVII) and claim 143 (Group XVIII) are directed to the 5,7-lactone- $\Delta^{9,11}$ -17-spirobutyrolactone intermediate E and Group XVIII is directed to the 5,7-lactone- $\Delta^{9,11}$ -17-spirobutyrolactone intermediate F. Moreover, claims 142 and 143 are in the same class and subclass, i.e., class 540 (3+).
11. Claims 144-145 (Group XIX) are directed to the 3-keto-5,7-lactone-9,11-epoxy and 3-keto-5,7-lactol-9,11-epoxy intermediates 211 and 210. They may reasonably be separated from the other claim groups.

12. Claim 146 (Group XX) is directed to the 3-keto-5,7-lactol-9,11-epoxy intermediate 209. It may reasonably be separated from the other claim groups.
13. Claims 147-148 (Group XXI), claim 149 (Group XXII) and claims 150-151 (Group XXIII) are directed to the intermediates involved in the spirolactonization reaction using a ylide reagent. For example, claims 147-148 are directed to 3-ketal-5,7-acetal-17-spirobutyrolactone and corresponding 17-malonic ester and 17-keto intermediates 208 and 207. Claim 149 is directed to the corresponding 17-oxirane intermediate 206 and claims 150-151 are directed to the corresponding 17-keto intermediate 205 and its predecessor 3-ketal-5,7-lactol-17-keto intermediate 204. Moreover, these claims are in the same class, i.e., class 540.
14. Claim 152 (Group XXIV) is directed to the 3-enol ether-7 $\alpha$ -formyl intermediate 203. It may reasonably be separated from the other claim groups.

#### Election

Applicants provisionally elect the claims of Group XVIII (claim 143) for examination in this application.

For search purposes, Applicants elect the following species.

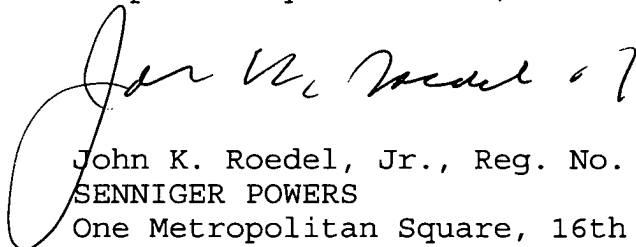


CONCLUSION

Favorable reconsideration and early allowance of all claims are respectfully requested. Applicants respectfully request a one-month extension of time to and including July 20, 2004, for filing a response to the May 20, 2004 Office action in this matter. Enclosed is a check in the amount of \$110.00 to cover the fee for the requested one-month extension of time.

The Commissioner is hereby authorized to charge to Deposit Account No. 19-1345 any fees under 37 CFR 1.16 and 1.17 which may be required during the entire pendency of this application

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John K. Roedel, Jr.", is written over the typed name and address.

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